



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 4
ATLANTA FEDERAL CENTER
61 FORSYTH STREET
ATLANTA, GEORGIA 30303-8960

November 9, 2015

Rick Lint, Forest Supervisor
U.S. Forest Service
4931 Broad River Road
Columbia, SC 29212

RE: Francis Marion National Forest Draft Revised Land Management Plan and Draft Environmental Impact Statement, SC; CEQ Number: 20150215

Dear Mr. Lint:

Pursuant to Section 102(2)(C) of the National Environmental Policy Act (NEPA) and Section 309 of the Clean Air Act (CAA), the U.S. Environmental Protection Agency (EPA) has reviewed the subject Francis Marion National Forest Draft Revised Land Management Plan and Revised Draft Environmental Impact Statement (DEIS). The U.S. Forest Service (USFS) is the lead Federal agency for the proposed action.

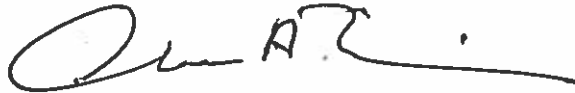
The proposed action by the USFS is to revise the 1996 Francis Marion National Forest Revised Land and Resource Management Plan ('forest plan'). The area affected by the proposal includes nearly 260,000 acres of Francis Marion National Forest ('Francis Marion'), which is located Berkeley and Charleston Counties north of Charleston, S.C. The forest plan guides all natural resource management activities on the Francis Marion to meet the objectives of Federal law, regulation, and policy. The proposed action would also effect a wide range of socioeconomic factors as they relate to natural resources. The attachment includes the EPA's DEIS detailed comments and recommendations pursuant to our review of the revised draft forest plan (Please see the attachment).

The EPA understands the need for multiple-use activities and supports the management of National Forests that place less emphasis on traditional harvesting and other consumptive uses and a greater emphasis on recreation and ecosystem enhancement. The EPA has rated this document 'EC-1', meaning that we have some Environmental Concerns for the proposed action and that some clarifying information is being requested for the Final EIS. We have some environmental concerns about the potential biological impacts from these actions including stream sedimentation, loss of habitat and reduction of biodiversity, and species impacts.

We appreciate the opportunity to review the proposed action and appreciate the revised agency review schedule based on the Regional receipt date of the document. Please feel free to contact

me at (404) 562- 9512, if you have any questions on the attached detailed comments. When the Final EIS is available for review, please send one hard copy and one CD to the EPA Region 4 office for our review.

Sincerely,

A handwritten signature in black ink, appearing to read "Chris A. Militscher", with a long horizontal line extending to the right.

Christopher A. Militscher
Chief, NEPA Program Office
Resource Conservation and Restoration Division

Attachment: EPA Detailed Comments and Recommendations

Attachment
EPA's Detailed Comments and Recommendations
Francis Marion National Forest Draft Revised Land Management Plan and Draft
Environmental Impact Statement, SC; CEQ Number: 20150215

Chapter 3. Affected Environment and Environmental Consequences

3.2.3 Air Quality (pages 57-60):

The land management activity most likely to affect air quality will be prescribed burning. The DEIS indicates that Alternative 1 presents no change in the number of acres burned per decade during the dormant and growing season; approximately 260,000 acres and 40,000 acres burned per decade, respectively. Alternative 2 will provide the highest level of hazardous fuels reduction and ecological restoration and maintenance with prescribed burnings, lasting less than 24 hours, of approximately 195,000 acres (dormant season) and 105,000 acres (growing season). Alternative 3 proposes the least amount of prescribed acres burned at 167,000 acres (dormant season) and 105,000 acres (growing season). Alternative 3 will also see the greatest increase in fuel loading due to increases in shrub growth.

Recommendation: The EPA recommends that the USFS continue to comply with the Federal and State guidelines associated with prescribed burns. While Alternative 2 will result in the greatest hazardous fuels reduction and ecological restoration and maintenance, it will also contribute to the greatest air quality impact of the three alternatives. Alternative 2 would also incorporate other fuels reduction treatments, such as mechanical, chemical, and biological activities that would mimic the historical role of a wildland fire without increased smoke and air pollutant production. However, the DEIS indicates that the increase in smoke from prescribed burning activities is not expected to affect the continued attainment of the Federal and State air quality standards.

3.2.4. Climate Change (pages 60-71)

According to the DEIS, the key factors expected to affect the Francis Marion include an increase in extreme weather events such as hurricanes, heat waves, droughts, tornadoes, floods, and lightning storms. These issues are expected to continue to grow over the life of the revised forest plan. Previous storms such as Hurricane Hugo resulted in damage to one-third of the Francis Marion forests, which included timber damage, high winds, downed trees, blocked roads, closed trails, closed facilities, recreational site damage, and a greater risk of catastrophic fire from increased shrub growth.

The DEIS includes strategies that address the effects of increasing weather disturbances and responding to anticipated climate changes. These strategies are incorporated into the alternatives and include the reduction of vulnerabilities by maintaining and restoring resilient native ecosystems and conducting prescribed burns.

National forests can play an important role in both mitigating and adapting to the effects of

climate change. Mitigation measures focus on strategies such as carbon sequestration by natural systems, ways to increase carbon stored in wood products, ways to provide renewable energy from woody biomass to reduce fossil fuel consumption, and ways to reduce environmental footprints. Adaptation measures address ways to maintain forest health, diversity, productivity, and resilience under uncertain future conditions.

Recommendation: The DEIS indicates that the USFS's Best Management Practices (BMPs) will be used to maintain resilience and resistance to a changing climate. The EPA notes that under all three alternatives the Francis Marion remains a carbon sink.

3.2.3 Water Quality (pages 72-90):

According to the DEIS, under Alternative 2 (i.e., the 'preferred alternative') and Alternative 3, forest management activities are not anticipated to substantially or permanently impair water quality nor result in measurable changes to overall watershed condition ranking. The implementation of mitigation measures, such as the use of BMP's and adherence to forest standards and guidelines are being proposed by the USFS. Nevertheless, timber harvesting in forests will result in some soil and water impacts associated erosion, increased sedimentation, and potential degradation of water quality.

Recommendations: The EPA supports the effective use of BMPs and adherence to forest standards and guideline for water quality. We recommend reducing the nonpoint source pollution of surface and ground waters that can result from forestry activities, recreation, fire management, and roads. These activities include but are not limited to:

- Tracking the implementation of BMPs used to control nonpoint source pollution generated by forestry practices, recreation, fire management, and roads.
- Fully utilizing the USFS published guidelines for National Best Management Practices (USDA, 2012) to maintain and improve water quality.
- Developing water-quality monitoring plans to evaluate the effectiveness of forestry BMPs in meeting water-quality goals or standards.
- Design of monitoring projects and the selection of variables and methods to correlate BMP implementation with changes in stream water quality. Providing information on methods for sample site selection, sample size estimation, sampling, and result evaluation and presentation. The focus is to develop statistical approaches needed to collect and analyze data that are accurate and defensible.
- The EPA supports efforts to implement the nonpoint source (NPS) total maximum daily load (TMDL) program. Nonpoint source TMDLs and watershed-based plans designed to implement the NPS TMDLs, provide the necessary link between actions on the ground and the water quality results to be achieved.
- The EPA continues to support planning at the landscape level to address broader ecological concerns such as biodiversity, watershed maintenance and restoration, and forest fragmentation.
- The EPA recommends that ecological and other environmental values should be the primary driving factors in the identification, protection, and management of roadless areas in Francis Marion.

3.4.14 Social Demographics (pages 275-298) & Environmental Justice (pages 299-301):

The EPA notes that the Environmental Justice (EJ) section is separate from the Social Demographic section regarding low-income and minority populations. The DEIS also indicates that the potential benefits of the proposed forest plan would accrue to all segments of the population and no disproportionate negative environmental or health impacts are anticipated under all of the alternatives. However, it is also noted that Gullah Geechee are working hard to pass on their traditions and values, but that rapid coastal development and soaring land costs will threaten the passing on of these traditions to future generations. Additionally, the DEIS also indicates in the EJ section that there is subsistence consumption of fish, wildlife, and/or vegetation within the planning area.

Recommendation: The EJ analysis should indicate the efforts made to identify or quantify the amount of subsistence consumption within the planning area that involve low-income and minority populations. The Final EIS should summarize any EJ concerns raised during the public engagement process. The EPA further suggests to the USFS consider incorporating the EJ section as a subsection of the Social Demographics section in the Final EIS because understanding EJ issues is very heavily dependent on social demographics data.

The EPA recommends some sustainability concepts which could be considered by the USFS in the final management plan and Final EIS:

‘Green Building’

‘Green building’ is the practice of creating structures and using processes that are environmentally-responsible and resource-efficient throughout a building’s life-cycle from design to construction, operation, maintenance, renovation and deconstruction. This practice expands and complements the classical building design concerns of economy, utility, durability, and comfort. Green building is also potentially known as a sustainable or high performance building. Green buildings are designed to reduce the overall impact of the built environment on human health and the natural environment by:

- Efficiently using energy, water, and other resources
- Protecting occupant health and improving employee productivity
- Reducing waste, pollution, and environmental degradation

For example, green buildings may incorporate sustainable materials in their construction (e.g., reused, recycled-content, or made from renewable resources); create healthy indoor environments with minimal pollutants (e.g., reduced product emissions); and/or feature landscaping that reduces water usage (e.g., by using native plants that survive without extra watering).

In the United States, buildings account for:

- 39 percent of total energy use
- 12 percent of the total water consumption
- 68 percent of total electricity consumption
- 38 percent of the carbon dioxide emissions

Potential benefits of green building can include:

Environmental benefits

- Enhance and protect biodiversity and ecosystems
- Improve air and water quality
- Reduce waste streams
- Conserve and restore natural resources

Economic benefits

- Reduce operating costs
- Create, expand, and shape markets for green product and services
- Improve occupant productivity
- Optimize life-cycle economic performance

Social benefits

- Enhance occupant comfort and health
- Heighten aesthetic qualities
- Minimize strain on local infrastructure

Green Parking

Green parking refers to several techniques that when applied together reduce the contribution of parking lots to total impervious surfaces. From a storm water perspective, green parking techniques applied in the right combination can dramatically reduce impervious cover and, consequently, reduce the amount of storm water runoff. Green parking lot techniques include: setting minimums of permanent parking spaces; minimizing the dimensions of parking lot spaces; utilizing alternative pavers in overflow parking areas; using bioretention areas to treat storm water; and encouraging shared parking, wherever feasible.

Green parking lots can dramatically reduce the creation of new impervious cover. How much is reduced depends on the combination of techniques used to achieve the 'greenest parking'. While the pollutant removal rates of bioretention areas have not been directly measured, their capability is considered comparable to a dry swale, which removes approximately 91 percent of total suspended solids, 67 percent of total phosphorous, 92 percent of total nitrogen, and 80-90 percent of metals (Claytor and Schueler, 1996).

The North Carolina's Fort Bragg vehicle maintenance facility parking lot is an excellent example of the benefits of re-thinking parking lot design (NRDC, 1999). The redesign incorporated storm water management features, such as detention basins located within grassed islands, and an onsite drainage system that exploited existing sandy soils. The redesign reduced impervious

surfaces by approximately 40 percent, increased parking by 20 percent, and saved 20 percent or \$1.6 million on construction costs over the original, conventional parking lot design.

Briefly, three other sustainable activities which may be applicable to the USFS' general management plan are as follows:

- **Green Detention Ponds**
- **Rain Water Harvesting**
- **Rain Gardens**
- **Solar lighting or other renewable energy sources for buildings and facilities**

The EPA asks that the USFS consider these recommendations in its development of its final land management plan and Final EIS.